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(54) **Systems and methods for treating a hollow anatomical structure**

(57) A device for treating a hollow anatomical structure (HAS), the device comprising:
a catheter shaft (142, 143); and
a helical coil resistive element (140) with the catheter shaft (142, 143), wherein the helical coil resistive element (140) has a shape memory property that returns the resistive element (140) to a pre-shaped expanded coil form upon heating such that the resistive element (140) is movable from a collapsed position to an expanded position.

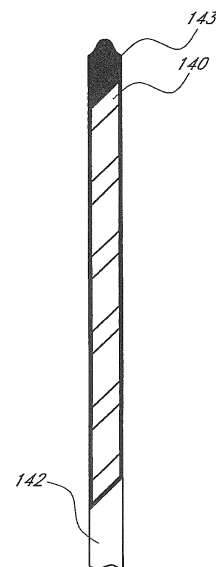


FIG. 12A



EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2002/062124 A1 (KEANE DAVID [US]) 23 May 2002 (2002-05-23) * paragraph [0030]; figures 2,6 *	1-5	INV. A61B18/08 A61B18/14 A61B18/24
X	WO 01/37723 A2 (BOSTON SCIENT LTD [BB]) 31 May 2001 (2001-05-31) * page 17, line 17 - page 18, line 10; figures 16a-c *	1-10	ADD. A61B90/00 A61B18/04 A61B18/20
X	US 5 972 026 A (LAUFER MICHAEL D [US] ET AL) 26 October 1999 (1999-10-26) * column 7, line 18 - line 38; figures 2-4 *	1-5	
X	RU 2 057 488 C1 (SMET 2 N VNEDRENCHESKAY PROIZV [RU]) 10 April 1996 (1996-04-10) * abstract; figures 1-3 *	1-5	
A	US 6 322 559 B1 (DAULTON JAY S [US] ET AL) 27 November 2001 (2001-11-27) * column 6, line 42 - column 7, line 2; figures 1,2 *	1-10	TECHNICAL FIELDS SEARCHED (IPC) A61B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 9 February 2016	Examiner Mayer-Martenson, E
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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09-02-2016

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002062124 A1	23-05-2002	US 2002062124 A1	23-05-2002
		US 2003208199 A1	06-11-2003
-----	-----	-----	-----
WO 0137723 A2	31-05-2001	CA 2391488 A1	31-05-2001
		EP 1233716 A2	28-08-2002
		EP 2712567 A1	02-04-2014
		JP 4558251 B2	06-10-2010
		JP 2003514605 A	22-04-2003
		WO 0137723 A2	31-05-2001
-----	-----	-----	-----
US 5972026 A	26-10-1999	AU 2027599 A	26-07-1999
		US 5972026 A	26-10-1999
		US 6283989 B1	04-09-2001
		WO 9934741 A1	15-07-1999
-----	-----	-----	-----
RU 2057488 C1	10-04-1996	NONE	
-----	-----	-----	-----
US 6322559 B1	27-11-2001	AU 4854499 A	24-01-2000
		US 6322559 B1	27-11-2001
		WO 0001313 A1	13-01-2000
-----	-----	-----	-----